

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

List of Claims:

1. (Currently Amended) A method, comprising:
 - ~~establishing, by a first wireless terminal, a beacon interval for an ad-hoc network, the beacon interval being established in a first wireless terminal; and~~
 - ~~broadcasting beacon frames from the first wireless terminal at the beacon intervals;~~

~~wherein the first wireless terminal starts to act as a beacon broadcaster in the ad-hoc network and one wireless terminal at a time acts as the beacon broadcaster during normal operation of the ad-hoc network; and~~

~~introducing an identifier list into, wherein at least someone or more of the beacon frames, comprises the an identifier list including identifiers of wireless terminals belonging to the ad-hoc network, the identifiers including an identifier of a second wireless terminal different from the first wireless terminal.~~
2. (Cancelled).
3. (Cancelled).
4. (Currently Amended) A method according to claim 3, further comprising indicating the predetermined intervals longer than one beacon interval in the one or more of the beacon frames, wherein the predetermined interval is a time moment when another wireless terminal may be selected as a beacon broadcaster, and wherein selecting the another wireless terminal as the beacon broadcaster is based on a predetermined rule and the identifier list.
5. (Cancelled).

6. (Currently Amended) A method according to claim 1, further comprising receiving by the first wireless terminal, an identifier of a third wireless terminal ~~transmitting, when a the third wireless terminal joins the ad-hoc network, an identifier of the wireless terminal to the wireless terminal currently acting as the beacon broadcaster.~~

7. (Currently Amended) A method according to claim 1, further comprising ~~sending~~ receiving by the first wireless terminal at least one traffic announcement message to the wireless terminal currently acting as the beacon broadcaster, each the at least one traffic announcement message identifying at least one wireless terminal for which another wireless terminal has data to be delivered.

8. (Cancelled).

9. (Currently Amended) A method according to claim 1, further comprising organizing the identifiers of the wireless terminals in a priority order, ~~which determines the order in which the terminals act as the a beacon broadcaster.~~

10-12. (Cancelled).

13. (Currently Amended) A method according to claim 1, wherein the identifier list ~~contains~~ further includes media access control addresses of the wireless terminals belonging to the ad-hoc network.

14. (Currently Amended) A method according to claim 1, further comprising inserting power state information in the identifier list, the power state information indicating whether a wireless terminal ~~mentioned~~ included in the list is in a power save state.

15. (Previously Presented) An apparatus, comprising:

- a receiver configured to receive beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;

- a controller configured to decide, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network; and

- a transmitter, responsive to the controller, configured to broadcast beacon frames in the ad-hoc network, the transmitter being configured to insert the identifier list in at least some of the beacon frames broadcast by the wireless terminal.

16. (Previously Presented) The apparatus according to claim 15, wherein the transmitter is configured to send at least one traffic announcement message to another wireless terminal, wherein said at least one traffic announcement message identifies at least one wireless terminal for which the wireless terminal has data to be delivered, and wherein said another wireless terminal is the beacon broadcaster in the ad-hoc network.

17. (Cancelled).

18. (Previously Presented) The apparatus according to claim 15, wherein the transmitter is configured to transmit an identifier of the wireless terminal to another wireless terminal acting as the beacon broadcaster in the ad-hoc network.

19. (Previously Presented) The apparatus according to claim 15, wherein the identifier list includes media access control addresses of the wireless terminals belonging to the ad-hoc network.

20-21. (Cancelled).

22. (Currently Amended) An apparatus, comprising:

a transmitter configured to broadcast beacon frames at beacon intervals in an ad-hoc network, wherein the transmitter is configured to insert an identifier list in at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ad-hoc network, wherein the identifiers include an identifier of a wireless terminal different from the apparatus.

23. (Currently Amended) The apparatus according to claim 22, further comprising a processor configured to establish a one or more of the beacon intervals for the ad-hoc network.

24. (Previously Presented) The apparatus according to claim 22, further comprising a processor configured to receive and handle at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network, the processor being configured to compile, based on the at least one traffic announcement message, a traffic indication data element, and to insert the traffic indication data element into a selected subsequent beacon frame.

25-30. (Cancelled).

31. (Previously Presented) A method, comprising:

- receiving beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;
- deciding, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network;
- responsive to the deciding, broadcasting beacon frames in the ad-hoc network; and
- inserting the identifier list in at least some of the beacon frames broadcast by the wireless terminal.

32. (Previously Presented) The method according to claim 31, further comprising sending at least one traffic announcement message to another wireless terminal, wherein said at least one traffic

announcement message identifies at least one wireless terminal for which the wireless terminal has data to be delivered, and wherein said another wireless terminal is the beacon broadcaster in the ad-hoc network.

33. (Previously Presented) The method according to claim 31, further comprising:
receiving and handling at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network;

compiling, based on the at least one traffic announcement message, a traffic indication data element; and

inserting the traffic indication data element into a selected subsequent beacon frame.

34. (Previously Presented) The method according to claim 31, further comprising
transmitting an identifier of the wireless terminal to another wireless terminal acting as the beacon broadcaster in the ad-hoc network.

35. (Currently Amended) A computer-readable storage medium ~~encoded with~~ storing
instructions that, when executed, cause an apparatus to be configured to control a processor to
perform a process, comprising:

~~- establishing~~ establish, in a first wireless terminal, a beacon interval for an ad-hoc
network, ~~the beacon interval being established in a first wireless terminal; and~~
~~- broadcasting~~ broadcast beacon frames from the first wireless terminal at the beacon
intervals, ~~wherein the first wireless terminal starts to act as a beacon broadcaster in the ad-hoc~~
~~network and one wireless terminal at a time acts as the beacon broadcaster during normal~~
~~operation of the ad-hoc network; and~~

~~introducing~~, wherein one or more of the beacon frames comprise an identifier list ~~into~~
~~at least some of the beacon frames, the identifier list including identifiers of wireless terminals~~
~~belonging to the ad-hoc network, the identifiers including an identifier of a second wireless~~
terminal different from the first wireless terminal.

36. (Currently Amended) A computer-readable storage medium storing instructions that, when executed, cause an apparatus to:~~encoded with instructions configured to control a~~ processor to perform a process, comprising:

- ~~receiving~~receive beacon frames at beacon intervals, ~~at least some~~one or more of the beacon frames including an identifier list including identifiers of a plurality of terminals belonging to an ad-hoc network;

- ~~deciding~~decide, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network;

- responsive to the deciding, ~~broadcasting~~broadcast beacon frames in the ad-hoc network; and

- ~~inserting~~insert the identifier list in ~~at least some~~the one or more of the beacon frames broadcast by the wireless terminal.

37. (Cancelled).